

Decane, 5-cyclohexyl-

Other names:	Cyclohexane, 1-butylhexyl
Inchi:	InChI=1S/C16H32/c1-3-5-8-12-15(11-6-4-2)16-13-9-7-10-14-16/h15-16H,3-14H2,1-2H3
InchiKey:	WAESBVVHJAMMKF-UHFFFAOYSA-N
Formula:	C16H32
SMILES:	CCCCC(CCCC)C1CCCCC1
Mol. weight [g/mol]:	224.43
CAS:	13151-76-3

Physical Properties

Property code	Value	Unit	Source
gf	105.85	kJ/mol	Joback Method
hf	-324.53	kJ/mol	Joback Method
hfus	25.51	kJ/mol	Joback Method
hvap	51.25	kJ/mol	Joback Method
log10ws	-5.93		Crippen Method
logp	5.953		Crippen Method
mcvol	225.440	ml/mol	McGowan Method
pc	1548.78	kPa	Joback Method
rinpol	1577.00		NIST Webbook
tb	584.59	K	Joback Method
tc	771.67	K	Joback Method
tf	262.46	K	Joback Method
vc	0.859	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	606.23	J/molxK	584.59	Joback Method
cpg	629.24	J/molxK	615.77	Joback Method
cpg	651.12	J/molxK	646.95	Joback Method
cpg	671.90	J/molxK	678.13	Joback Method
cpg	691.62	J/molxK	709.31	Joback Method
cpg	710.30	J/molxK	740.49	Joback Method
cpg	727.99	J/molxK	771.67	Joback Method

dvisc	0.0097461	Paxs	262.46	Joback Method
dvisc	0.0027083	Paxs	316.15	Joback Method
dvisc	0.0010915	Paxs	369.84	Joback Method
dvisc	0.0005539	Paxs	423.52	Joback Method
dvisc	0.0003274	Paxs	477.21	Joback Method
dvisc	0.0002153	Paxs	530.90	Joback Method
dvisc	0.0001529	Paxs	584.59	Joback Method

Sources

Joback Method:	https://en.wikipedia.org/wiki/Joback_method
McGowan Method:	http://link.springer.com/article/10.1007/BF02311772
NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C13151763&Units=SI
Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci990307l
Crippen Method:	https://www.chemeo.com/doc/models/crippen_log10ws

Legend

cpg:	Ideal gas heat capacity
dvisc:	Dynamic viscosity
gf:	Standard Gibbs free energy of formation
hf:	Enthalpy of formation at standard conditions
hfus:	Enthalpy of fusion at standard conditions
hvap:	Enthalpy of vaporization at standard conditions
log10ws:	Log10 of Water solubility in mol/l
logp:	Octanol/Water partition coefficient
mvol:	McGowan's characteristic volume
pc:	Critical Pressure
rinpol:	Non-polar retention indices
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume

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